AMENDMENTS TO THE CLAIMS

1. (Original) A cardiac port for insertion through a chamber wall of a heart chamber to perform a medical procedure inside of a beating heart, comprising:

a housing having a first end, a second end, and a lumen therethrough;

at least one valve disposed in the housing to open and close the lumen; and

an inlet connected to the housing, the inlet having an inlet passage in fluid communication with the lumen of the housing, the inlet adapted to transmit a fluid between an exterior of the port and the lumen of the housing.

2. (Original) The apparatus according to claim 1, wherein the housing includes a first portion and a second portion, the second portion having a length substantially equal to a thickness of the chamber wall.

3. (Original) The apparatus according to claim 2, wherein the second portion is flexible relative to the first portion.

4. (Original) The apparatus according to claim 2, wherein the inlet connects to the housing adjacent a position of the at least one value.

5. (Original) The apparatus according to claim 1, wherein the housing has first and second retainer members to retain the chamber wall therebetween.

6. (Original) The apparatus according to claim 5, wherein the first and second retainer members are annular flanges that encircle the exterior surface of the housing.

7. (Original) The apparatus according to claim 1, wherein the housing includes a first portion having a first diameter and a second portion having a second diameter smaller than that of the first portion.

8. (Original) The apparatus according to claim 7, wherein the second portion has a length substantially equal to a thickness of the chamber wall.

9. (Original) The apparatus according to claim 7, wherein the second portion is flexible relative to the first portion.

10. (Original) A cardiac port for insertion through a chamber wall of a heart chamber to perform a medical procedure inside of a beating heart, comprising:

a housing having a first end, a second end, and a lumen therethrough;

at least one valve disposed in the housing to open and close the lumen; and

first and second retainer members on the housing, the first retainer member being spaced from the second retainer member a predetermined distance to anchor the chamber wall between the first and second retainer members.

11. (Original) The cardiac port according to claim 10, wherein the first and second retainer members comprise first and second flanges disposed on an exterior surface of the housing.

12. (Original) The cardiac port according to claim 11, wherein a portion of the housing between the first flange and the second flange is flexible relative to a remaining portion of the housing.

13. (Original) The cardiac port according to claim 11, further comprising an inlet connected to the housing, the inlet having an inlet passage in fluid communication with the lumen of the housing, the inlet passage adapted to transmit a fluid between an exterior of the port and the lumen of the housing.

14. (Original) An assembly for use in performing a medical procedure inside of a beating heart of a patient, comprising:

a port including

a housing having a first end, a second end, and a lumen therethrough, the housing configured for insertion through a chamber wall of a heart chamber so that the first end is exterior of the chamber wall and the second end is interior of the chamber wall;

at least one valve disposed in the housing to open and close the lumen; and

an inlet connected to the housing, the inlet having an inlet passage in fluid communication with

the lumen of the housing; and

a fluid transport device having one end that attaches to the inlet of the port, another end that attaches to a fluid source, and a fluid channel therebetween to pass a fluid from the fluid source to the inlet, whereby the fluid passes from the inlet through the inlet passage and through the lumen into the heart chamber to maintain an intra-chamber pressure at a desired level.

15. (Original) The apparatus according to claim 14, wherein the another end of the fluid delivery device is configured to insert into an artery of the patient to permit passage of arterial blood through the fluid channel.

16.-29. (Canceled)

30. (Previously Presented) A method for performing mitral valve annuloplasty in a beating heart, said method comprising:

attaching a suture or band of material to the valve annulus at fixed positions along the suture or band of material to reduce the length of the valve annulus while the heart is beating.

31. (Previously Presented) A method as in claim 30, wherein attaching comprises stapling the suture or band of material to the annulus.

32. (Previously Presented) A method as in claim 31, wherein stapling comprises introducing a stapler through a wall of the heart.

33. (Previously Presented) A method as in claim 32, wherein the stapler is introduced into the left atrium and staples are stapled into the annulus.

34. (Previously Presented) A method as in claim 30, wherein a plurality of staples are provided attached to the suture or a band of material.

35. (Previously Presented) A method as in claim 34, wherein the band of material is composed of DACRON® or polyester.

36. (Previously Presented) A method as in claim 30, wherein the staples are connected by suture.

37. (Previously Presented) A method as in claim 30, wherein the staples and suture or band of material are positioned about the posterior annulus.

38. (Previously Presented) A system for performing annuloplasty, said system comprising:

a plurality of plication staples; and

suture or a band of material adapted to be stapled to a mitral valve annulus at fixed positions along the suture or band of material to plicate mitral valve annulus tissue and thereby reduce the length of the mitral valve annulus;

wherein the staples and suture or band of material are adapted to be delivered into a left ventricle of a heart while the heart is beating.

39. (Previously Presented) A system as in claim 38, further comprising an instrument for delivering the staples to the valve annulus and plicating valve annulus tissue while the heart is beating.

40. (Previously Presented) A system as in claim 39, wherein the system comprises a port adapted to span a wall of the atrium and provide access therethrough and a staple which is adapted to pass through the port.

41. (Previously Presented) A method for reducing mitral valve regurgitation, said method comprising:

plicating tissue at a plurality of positions along the mitral valve annulus while the heart is beating thereby reducing the length of the mitral valve annulus; and

preventing the distances between adjacent ones of said postions from increasing after the placating step;

wherein the resulting plication inhibits mitral valve regurgitation.

42. (Previously Presented) A method as in claim 41, wherein plicating tissue comprises introducing a stapler into a heart chamber and placing staples around the annulus, wherein the staples fold to plicate the annulus tissue.

43. (Previously Presented) A method as in claim 42, wherein the staples are placed about the posterior annulus.

44. (Previously Presented) A method as in claim 42, wherein the stapler is introduced through a wall of the heart.

45. (Previously Presented) A method as in claim 44, wherein the stapler is introduced into the left atrium.

46. (Previously Presented) A method as in claim 41, wherein the tissue plicating step is carried out using staples.

47. (Previously Presented) A method as in claim 46, wherein the distance preventing step is carried out by joining the staples with a suture or band of material.

48. (Previously Presented) A method for performing mitral annulus plication, said method comprising:

introducing a firing device into a chamber of a beating heart; and

firing the firing device to place a plurality of staples along the mitral valve annulus, wherein the staples fold in on themselves to plicate tissue along the annulus; and

joining the staples to fixed positions along a suture or band of material.

49. (Previously Presented) A method as in claim 48, wherein the plicated tissue on the annulus assists in reducing mitral valve regurgitation.

50. (Previously Presented) A method as in claim 48, wherein the staples are placed about the posterior annulus.

51. (Previously Presented) A method as in claim 48, wherein the firing device is introduced through a wall of the heart.

52. (Previously Presented) A method as in claim 51, wherein the firing device is introduced into the left atrium.

53. (Previously Presented) A method as in claim 48, wherein the joining step is carried out using staples joined by a suture or band of material.

54. (New) A method for reducing mitral valve regurgitation comprising:

positioning an anchor assembly, comprising anchors secured to a suture or band of material at fixed positions therealong, at a valve annulus;

securing the anchors to the valve annulus; and

reducing the length of the valve annulus.

55. (New) A method as in claim 54 wherein the positioning step is carried out using plicating anchors and the length reducing step occurs when the plicating anchors are secured to the valve annulus.